

**STRUCTURE FOR CONTROLLED SHOCK AND
VIBRATION OF ELECTRICAL INTERCONNECTS**

CROSS REFERENCE TO RELATED APPLICATIONS

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8/25/05
This application is a divisional of application Serial No. 10/059,985, filed January 29, 2002, now Patent No. 6,658,729 which in turn is a division of Patent No. US 6,375,475 B1.

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FIELD OF THE INVENTION

This invention relates to electrical contacts between printed circuit boards and electronic modules, particularly involving contact sites through land grid array (LGA) sockets.

BACKGROUND OF THE INVENTION

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A typical LGA interposer system comprises a printed circuit board (PCB) with electrically conductive contact pads, a module (or other printed circuit board) with a corresponding set of electrically conductive contact sites, an interposer between the module and the printed circuit board and an array of spring elements to make electrical contact between the module and the printed circuit board. Clamps are used to

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mechanically hold the module to the interposer and to electrically join the module contact sites through the spring elements to the printed circuit board pads.

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A cooling device or heat sink is typically coupled to the module required to provide cooling of the entire electronic assembly. Many of the heat sinks have a substantial size and mass relative to the other components. This size and mass create a moment arm, causing relative movement between the module and the other components when the assembly is subjected to shock or vibration.